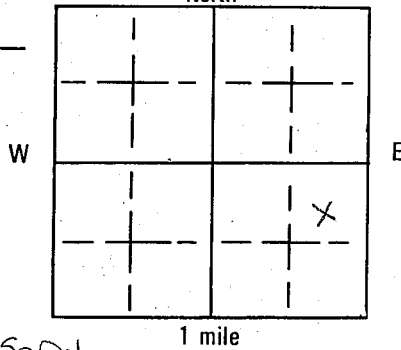


SOUTH DAKOTA WELL AND TEST HOLE PLUGGING REPORT

10-85

Location NE 1/4 SE 1/4 Sec 5 Twp 101-N Rg 49-W
of the 5th Prime Meridian

County

MinnehahaPlease mark well
location with
an "X"Within the city
limits of the
City of Sioux Falls, S.Dak

Well Owner:

Name FSD AirportAddress 2801 No. Tayree Lane - Sioux Falls, SD 57104By Soupp Construction IncPlugging completion Date 11-4-25

CHECK APPROPRIATE BOX

EXISTING WELL

☒ VARIANCE NO. 02-2025

TEST HOLE

☐

Well depth

45'

Casing material

Cement

Casing size(s)

40' feet

Casing condition

Good

Hole depth

Hole size

Describe plugging procedure:

45' to 14' 6" Crushed Quartzite then cover removed
And all piping - walkway + cement block room removed - water covered
walls removed to 14' and ground sloped - 1 1/2' of cement left to put
plugging grout into and grout also over sides, removed pea gravel to bottom of curb wall!

Describe grout or plugging material:

Plugged under VARIANCE 02-2025
3' of Eclipse - Non Shrinkage Admixt 4000 Grout and Penetron SB
Remainder of well + site covered with compact clay
to ground level

Type of non-slip plug:

This well or test hole was plugged under license # 111 And this report is true and accurate.Drilling firm Lacey Well Drilling Inc.

Signature of Licensed Representative

Jordan R. Lacey

Signature of Well Owner

Date

11-21-28

RECEIVED

DEC 01 2025

OFFICE OF
WATER

In Water Since 1946

11-21-25

Wells — Pumps
Dewatering Work
Test Drilling

LACEY WELL DRILLING, INC.
47582 - 240th St.
Dell Rapids, South Dakota 57022
Telephone (605) 428-5979

Down-Hole Camera
Water Specialists
Irrigation Supplies

Sioux Falls Airport Bragstad Collector Well #15 Decommissioning

- 10-13-25 Measured well 45' deep 40' Across - city removed pump & controls
- 10-16-25 Soukup started filled well with crushed Quartzite into
the six holes on top of well.
- 10-20-25 Quartzite to 14' SWL 15' - water covered
- 10-22-25 Removed cover off well and removed all piping - walkway.
Cement block room
- Next week Soukup removed and cleared well of all pieces
than dug & removed wall to 14' - leaving wall space
to hold grout.
- 10-28-25 Filled well casing and space around outside with 3'±
Eclipse - Non Shrinkage Admixt - 4000 Groutnah 20F - Penetron SB
MAde mound of fill to level required - let grout - cure
and settle than backfilled with clay compacted.

VARIANCE No: 02-2025

Witness by:

Joan Redder-Lacey

Joan Redder-Lacey

Lacey Well Drilling Inc.

Lic No: 111

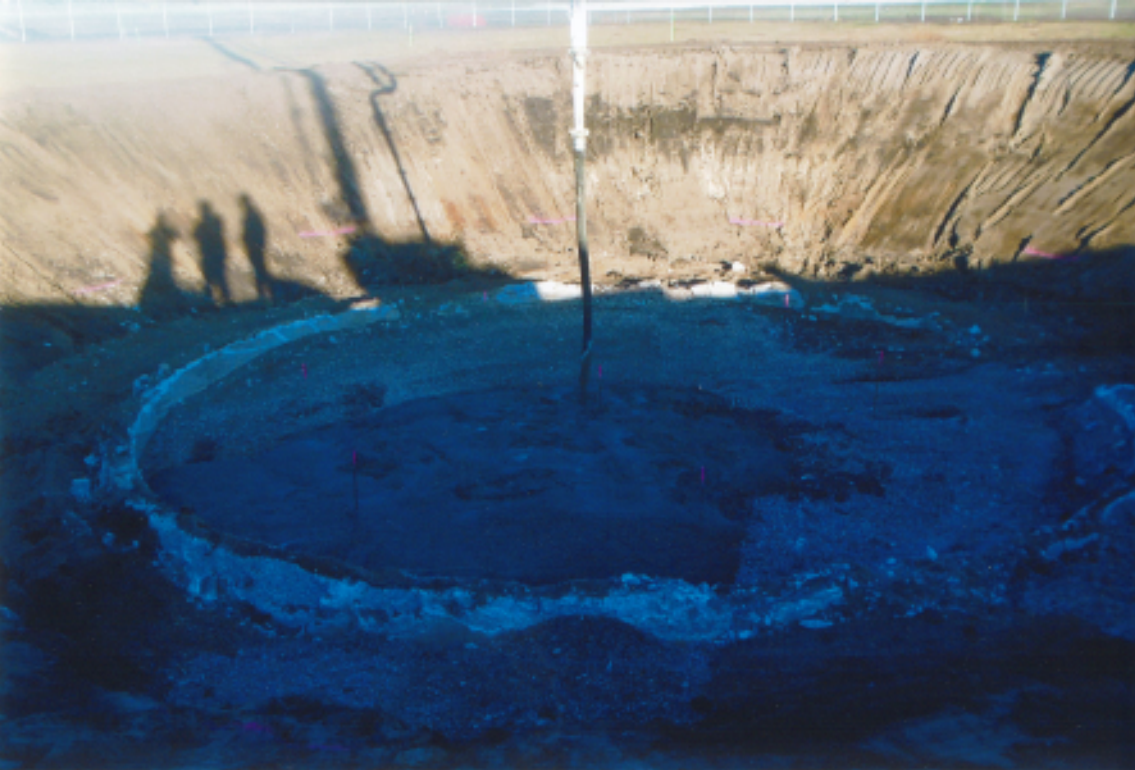
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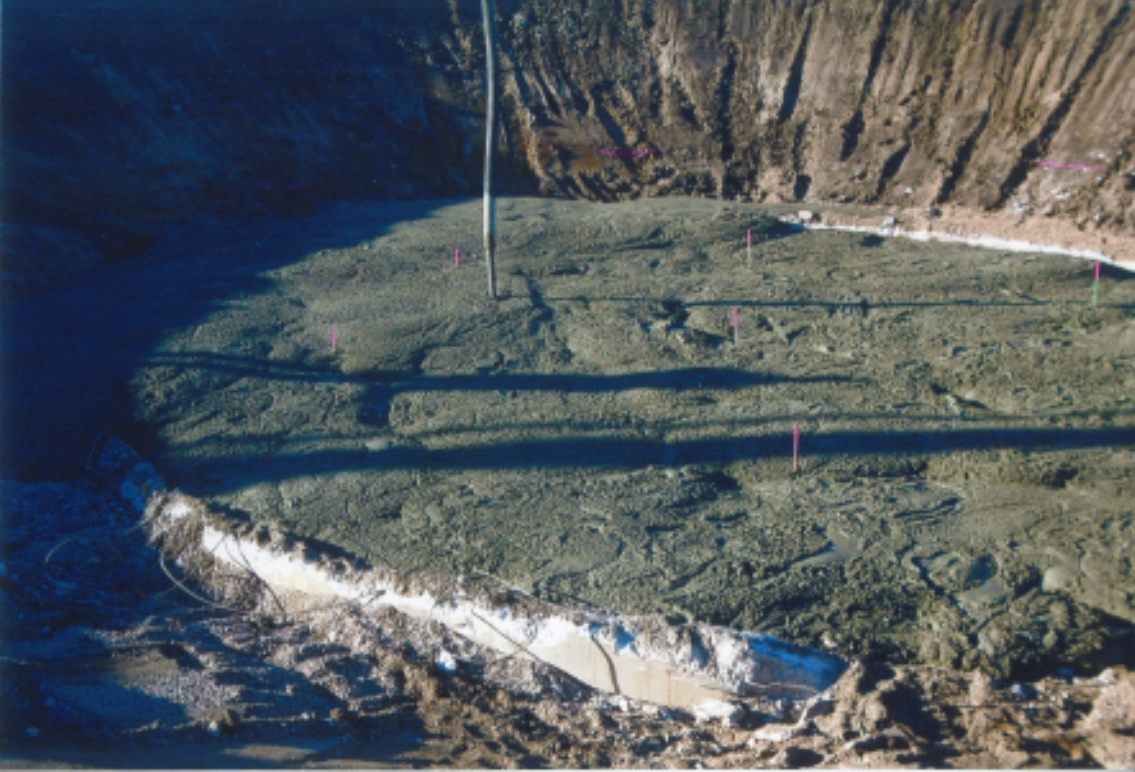
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OFFICE OF
WATER















REQUEST FOR A VARIANCE FROM CHAPTER 74:02:04
SOUTH DAKOTA WELL CONSTRUCTION STANDARDS

Pursuant to Section 74:02:04:75 of the South Dakota Well Construction Standards, the following is the decision of the acting Chief Engineer and Director of the Office of Water, Department of Agriculture and Natural Resources concerning the request for a well construction variance for Mead & Hunt, filed by licensed Professional Engineer Travis Hirschey.

The Director of the Office of Water grants **APPROVAL** of the request for a variance for plugging the City of Sioux Falls Bragstad Well #15 and associated monitoring well at the Sioux Falls Regional Airport (FSD) project site as follows:

1. This is a request for a variance from SD Well Construction Standard Section 74:02:04:69 which requires:

“Wells completed into unconfined aquifers, provided only one aquifer is encountered, may be backfilled with clean sand or gravel to the top of the aquifer. Test holes encountering a single, unconfined aquifer may be backfilled with drill cuttings or clean sand or gravel to the top of the aquifer. Above the aquifer, clay, bentonite grout, or cement grout shall be used for plugging to within at least three feet of the ground surface. If clay is to be used as a backfill material, a minimum of two feet of dry bentonite, bentonite grout, or cement grout must be placed at the top of the aquifer. The top three feet of casing or hole, if not filled with clay, bentonite grout, or cement grout, shall be backfilled with native material. Plugging materials must be added to the well or hole via tremie pipe to any well or test hole less than 16 inches in diameter and to any well or test hole more than 50 feet deep. If it cannot be verified that a well's casing was grouted in accordance with this chapter, an effort must be made to plug the annulus from the bottom of the annulus up to the ground surface with the same type of material or materials required for plugging inside the casing.”

2. The reason for this request is to allow the wells to be plugged to a depth further below ground surface than required under Section 74:02:04:69 and using several alternative materials to prevent shrinkage and long-term settlement/compaction of the plugging materials as well as having to disturb the plugging materials during later construction of an apron that is to be built for a terminal expansion at the airport. The wells to be plugged are located at:

NE ¼ SE ¼ Section 5 T101N-R49W of the 5th Prime Meridian within the city limits of the City of Sioux Falls, South Dakota in Minnehaha County

3. This variance allows Bragstad Well #15 and the associated monitoring well to be plugged under the following conditions: 1) every reasonable effort is made to construct an impermeable seal over the Bragstad Well #15 caisson and caisson annulus, and the monitoring well casing and annulus such that water and any potential contaminants in the water cannot move vertically through those spaces at a rate greater than the water can move vertically through the surrounding native soils, 2) the plugging of the wells is performed to as much of the portions of Section 74:02:04:69 as applicable while maintaining the primary goal of the variance request, 3) the wells are plugged to the to the specifications provided in the variance request and attached to this variance (in part), 4) a detailed well plugging report for each well is submitted to the DANR-Water Rights Program including as-built drawings of the Bragstad Well #15 plugging materials & methods and notation the wells were plugged under “Variance No. 02-2025”, and 5) the plugging of these wells meet all standards within Chapter 74:02:04 excluding the requested and approved variance to Section 74:02:04:69.
4. This variance does not relieve the licensed the well driller contracted to perform the work, or the well owner of the responsibility of complying with any local requirements that may be applicable to the plugging of the wells.

Prepared by: Adam Mathiowetz, Engineer IV
Dept. of Agriculture and Natural Resources
(605)-773-4061
523 E. Capitol Ave
Pierre, SD 57501

Approved by:

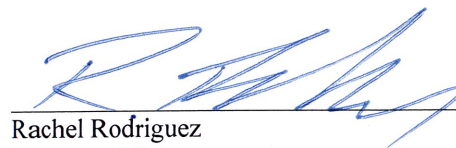


Mark Mayer, Acting Chief Engineer
Director-SD DANR Office of Water
July 29th, 2025

STATE OF SOUTH DAKOTA }
 }ss.
COUNTY OF HUGHES }

On this the 29th day of July 2025, before me Rachel Rodriguez the under signed officer, personally appeared Mark Mayer, who acknowledged himself to be the acting Chief Engineer of the SD Department of Agriculture and Natural Resources-Water Rights Program, and that he, as such, acting Chief Engineer being authorized so to do, executed the forgoing instrument for the purposes therein contained.

In witness whereof I hereunto set my hand and official seal.



Rachel Rodriguez
Notary Public
My Commission expires May 16, 2029

Variance No. 02-2025

CC:

Shannon Saramaa, Mead & Hunt (Shannon.saramaa@meadhunt.com);
Corey Theisen, Mead & Hunt (Corey.theisen@meadhunt.com)





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

July 30, 2025

Travis Hirschey
Mead & Hunt
1905 N Plaza Blvd
Suite 2
Rapid City SD 57702

Mr. Hirschey:

Enclosed is a variance from the SD Well Construction Standards for the Sioux Falls Regional Airport (FSD) well plugging project. Please note on each plugging report the wells were plugged under variance 02-2025 when they are submitted to the DANR-Water rights Program.

If you have any questions, please contact Adam Mathiowetz at (605) 773-3352.

Sincerely,

Mark Mayer
Director, Office of Water
SD Dept. of Agriculture and Natural Resources

Enclosure

CC:

Shannon Saramaa, Mead & Hunt (Shannon.saramaa@meadhunt.com);
Corey Theisen, Mead & Hunt (Corey.theisen@meadhunt.com)

SECTION 331133 – WELL PLUGGING

PART 1 - GENERAL

1.1 WORK INCLUDES:

- A. The Contractor shall furnish all labor, materials, equipment, and incidentals required to plug Well #15 Bragstad Well and associated monitoring well at the site, as specified in this Section. Plugging is in preparation for an expansion to the airport apron over the current well site. Limiting post-construction settlement is a primary concern with plugging the well.
- B. All labor, material, equipment and operations included in this Section will be in accordance with the American Water Works Association Standard for Water Wells (ANSI/AWWA A100-90). These Specifications supplement or modify those requirements set forth in ANSI/AWWA A100-90 and USEPA "Manual of Water Well Construction Practices".
- C. The work consists of plugging Well #15 which is approximately 40 feet in diameter and 43 feet (permit #xxxx). The adjacent monitoring well (permit #xxx) is also included in the required abandonment. The project Specifications generally describe well plugging requirements.

1.2 QUALIFICATIONS

- A. The well drilling Contractor shall be an experienced, reputable and knowledgeable licensed well driller with current license in the State of South Dakota.
- B. All equipment used for plugging shall be modern, serviceable equipment adequately suited for the service intended.

1.3 SUBMITTALS

- A. Materials required to establish compliance with the Specifications shall be submitted in accordance with the General Conditions. Submittals shall include at least the following:
 - 1. A listing of licenses, qualifications and references of the well drilling contractor.
 - 2. A work plan and schedule for well plugging.
 - 3. Shop drawing data relative to all materials proposed for the well plugging.

PART 2 - PRODUCTS

2.1 PLUGGING MATERIALS

- A. Crushed Quartzite: 100% passing 2 inch, <10% passing the ½ inch, <5% passing the #200; ¾ to 1 ½ inch; top surface is compacted with a large vibratory roller.
- B. Cementitious Grout: TBD
- C. Clean Sand Material: 100% passing the 2 inch, <50% passing the #40, and <12% passing the #200; placed in lifts and compacted to at least 92% of modified Proctor density (ASTM D:1557).
- D. Lean Clay (CL) (Temporary Cap): Lean Clay or Sandy Lean Clay with > than 50% passing the #200, less than 2% organic content, LL<50%, PI>12.

PART 3 - EXECUTION

3.1 PERMITS

- A. An approved variance to South Dakota Administrative Rule 74:02:04:69 was obtained by the FSD for Well #15 plugging, and can be found in Attachment 1. The variance was obtained per Administrative Rule 74:02:04:75, Variance.
- B. A Well Plugging Report is required to be filed with the South Dakota Department of Agriculture Natural Resources, Water Rights Program per Chapter 74:02:04:71. The following shall be submitted:
 - 1. Well #15 - The Contractor shall provide as-builts redlines of the drawings once plugging of Well #15 is complete. The Engineer will update the drawings and file the Well Plugging Report with DANR.
 - 2. Monitoring Well xxx– Contractor to file a Well Plugging Report per Chapter 74:02:04:71. (Contractor to submit to DANR and Copy Engineer)
 - (1) The name and complete mailing address of the owner;
 - (2) The legal description of the well or hole location;
 - (3) The completion date;
 - (4) The casing or hole size, type of well, and well or hole depth;
 - (5) A general description of the condition of the well;
 - (6) A description of the plugging procedure;
 - (7) The grout or material used to plug the well or test hole; and
 - (8) The date and the signature of the license representative.

WELL ABANDONMENT

C. General:

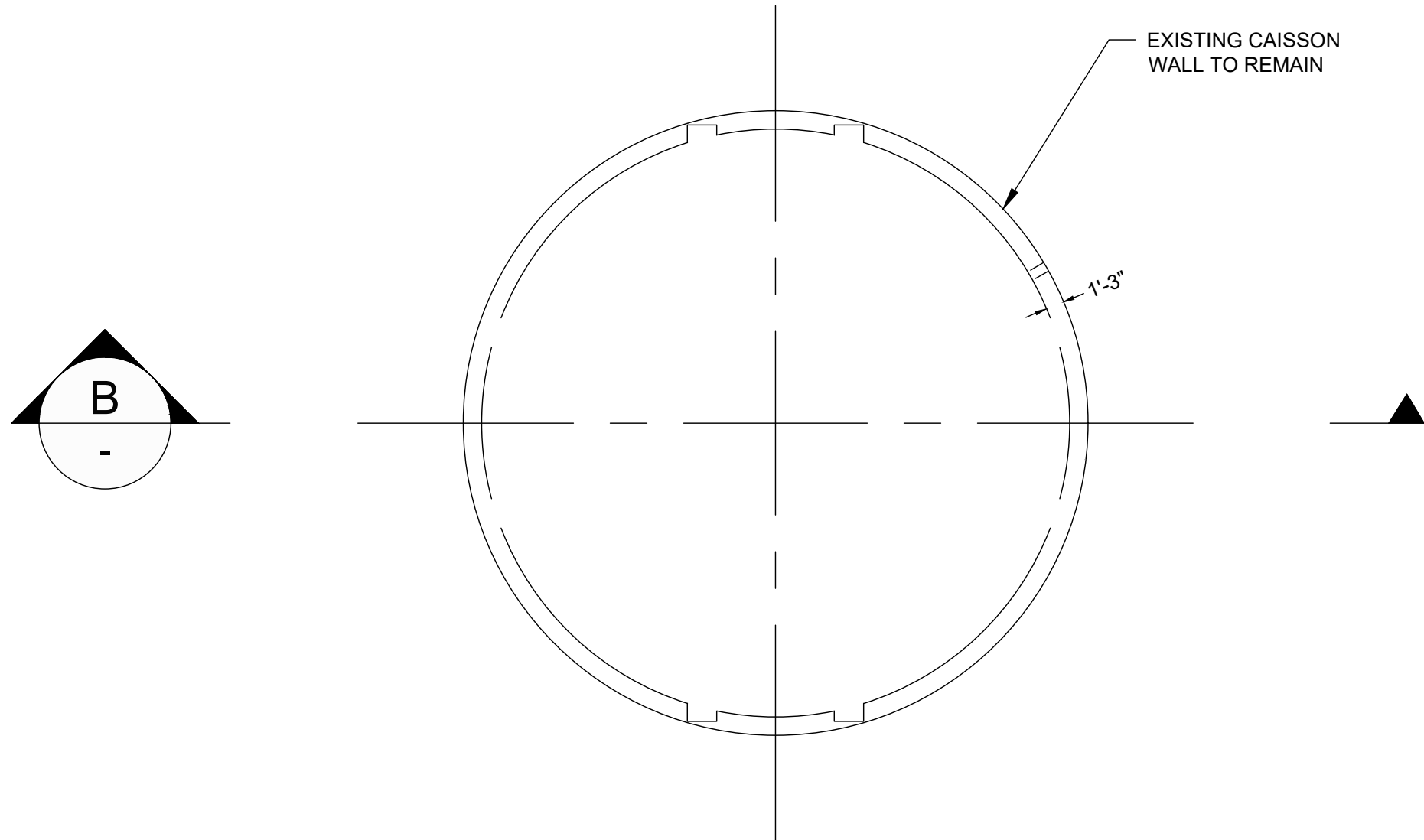
1. Any well which has been improperly constructed and/or deemed suitable for abandonment shall be plugged in accordance with requirements established by State and local regulatory agencies. In the case of conflicting requirements or in the absence of specific direction, procedures established in South Dakota Administrative Code 74:02:04:69 shall be followed.
2. It shall be assumed the upper structural members are required for lateral stability, and should remain in place while the lower well area is filled.
3. Dewatering of the well shall not be allowed during any phase of backfill.
4. A separate future project will include removal of the temporary clay cap, prior to construction of the new airport apron.

D. Plugging:

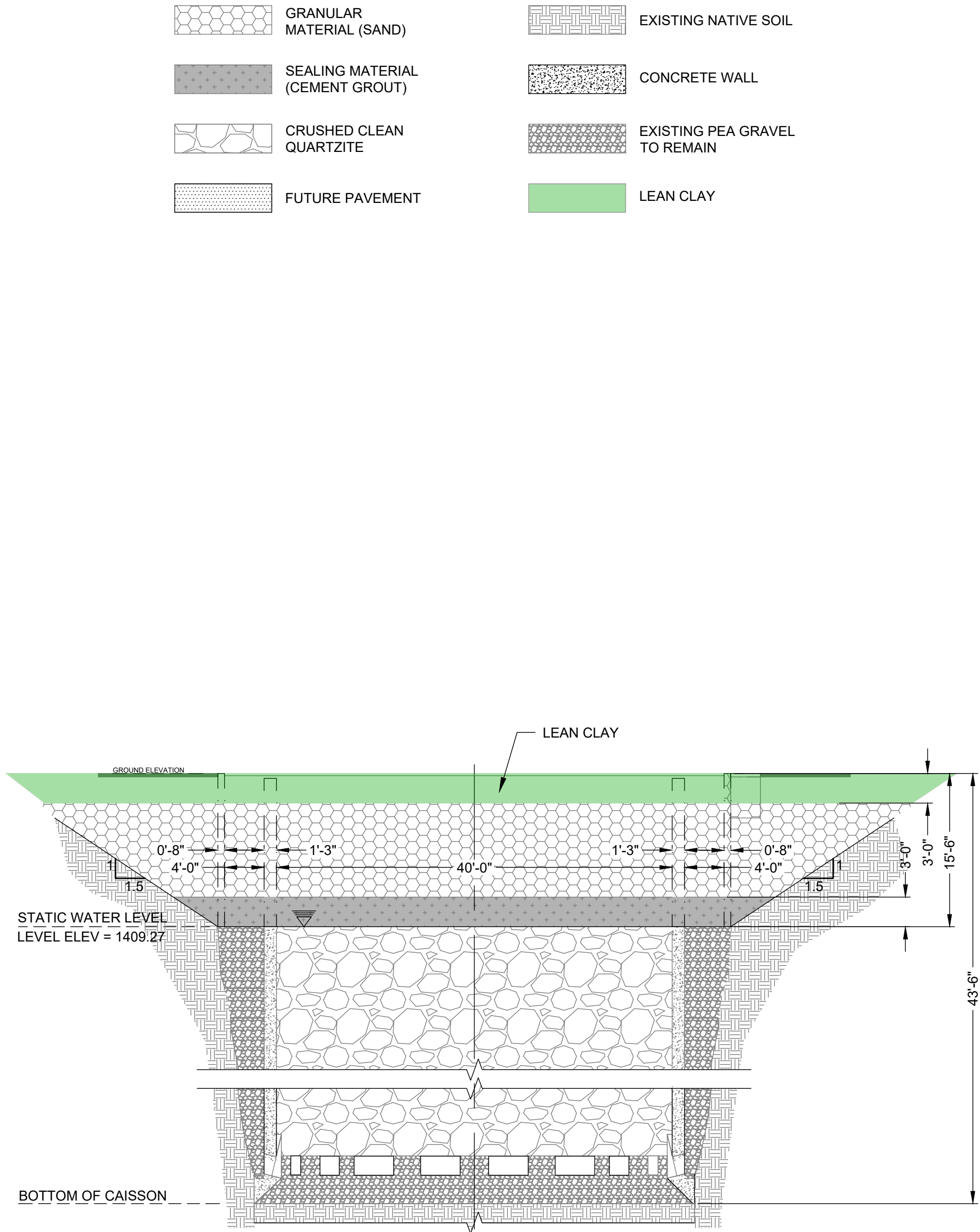
1. Materials used for well plugging shall be mixed as required in Specification section 2.1, "Plugging Materials".

END OF SECTION 331113

NOTE:
1. THE PLUGGING OF AN ABANDONED WELL NEEDS TO MEET REQUIREMENTS OUTLINED IN THE SD WELL CONSTRUCTION STANDARDS SECTIONS 74:02:04.69. THESE RULES SPECIFY HOW TO PLUG A WELL DEPENDING ON THE TYPE OF WELL CONSTRUCTION, THE TYPE OF AQUIFER OR AQUIFERS WHICH THE WELL PENETRATES, AND THE MATERIALS TO BE USED TO PLUG THE WELL. IT IS STRONGLY SUGGESTED THAT A SD LICENSED WELL DRILLER PERFORM THE WORK DUE TO THE VARYING CONDITIONS ENCOUNTERED IN PLUGGING AN ABANDONED WELL. THE WELL SHALL BE BACKFILLED WITH CLEAN SAND OR GRAVEL TO THE TOP OF THE AQUIFER. TEST HOLES SHALL BE BACKFILLED WITH CLEAN SAND OR PEA GRAVEL TO THE TOP OF THE AQUIFER. ABOVE THE AQUIFER, COMPACTED CLAY, BENTONITE PELLETS OR CHIPS, AND CEMENT GROUT SHALL BE USED FOR PLUGGING TO WITHIN AT LEAST THREE FEET OF THE GROUND SURFACE. IF CLAY IS TO BE USED AS A BACKFILL MATERIAL, A MINIMUM OF 2' OF DRY BENTONITE, BENTONITE GROUT, OR CEMENT GROUT MUST BE PLACED AT THE TOP OF THE AQUIFER. THE TOP FOOT OF CASING OR HOLE, IF NOT FILLED WITH CLAY SHALL BE BACKFILLED WITH NATIVE MATERIAL. PLUGGING MATERIALS MUST BE ADDED TO THE WELL OR HOLE VIA TREMIE PIPE TO ANY WELL OR TEST HOLE LESS THAN 16" DIAMETER AND TO ANY WELL OR TEST HOLE MORE THAN 50' DEEP. THE CITY OF SIOUX FALLS BRAGSTAD WELL DECOMMISSIONING DETAIL ILLUSTRATES HOW THIS WORK SHALL BE COMPLETED. PAYMENT FOR ALL COSTS, LABOR, AND MATERIALS ASSOCIATED WITH THE BRAGSTAD WELL DECOMMISSIONING AND ABANDONMENT SHALL BE INCLUDED IN THE BID ITEM "ABANDON BRAGSTAD WELL".



WELL 15 - PLAN VIEW
SCALE: 1" = 10'



WELL 15 - SECTION VIEW
SCALE: 1" = 10'

Mead & Hunt

Mead and Hunt, Inc.
1905 N Plaza Blvd, Suite 2
Rapid City, SD 57702
phone: 888-364-7272
meadhunt.com



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SIOUX FALLS REGIONAL AIRPORT
WELL 15 DECOMMISSIONING

2801 JAYCEE LANE
SIOUX FALLS, SD 57104

NOT FOR CONSTRUCTION

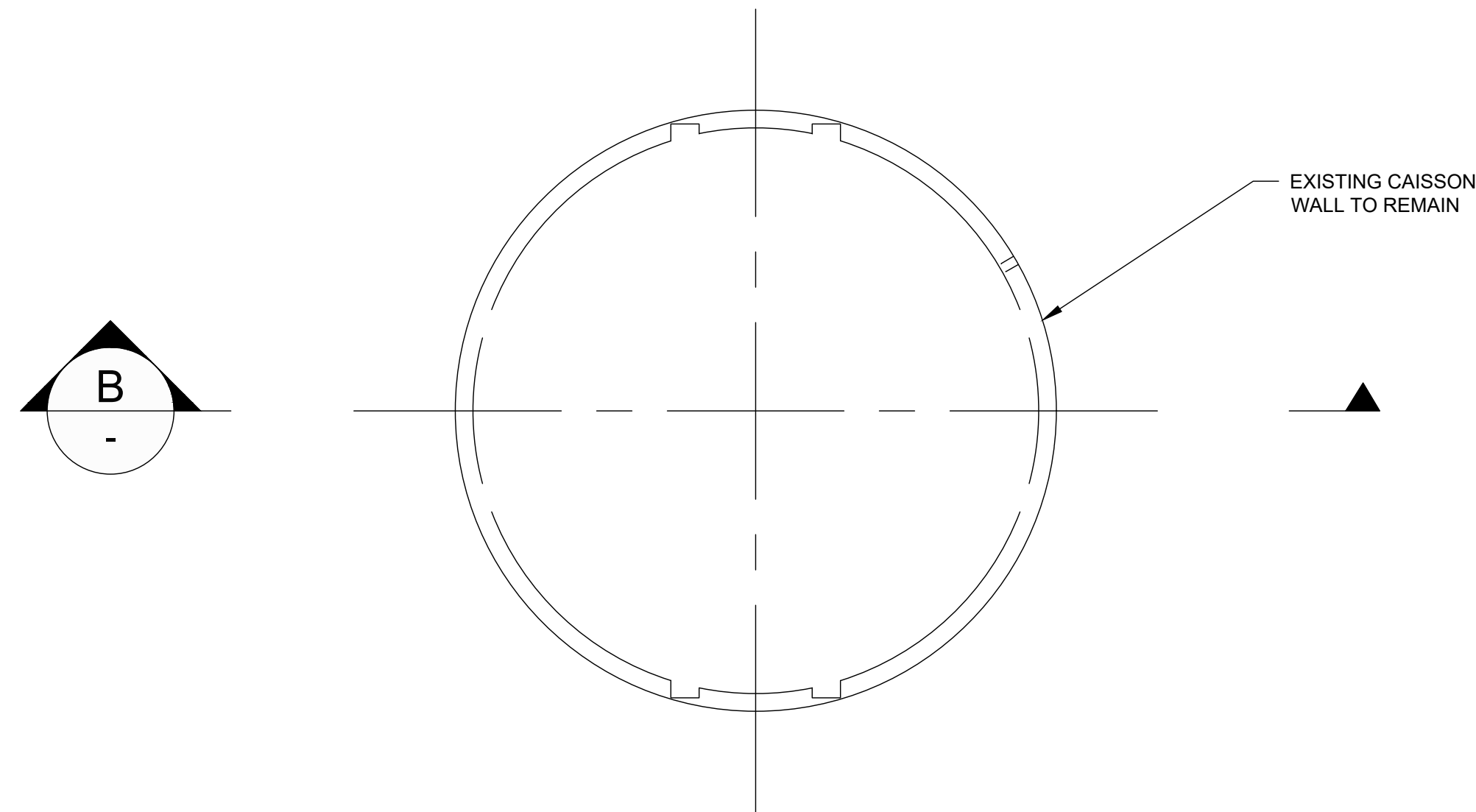
M&H NO.: 2890700-210946.06
DATE: JUNE 27, 2025
DESIGNED BY: SFS
DRAWN BY: RJG
CHECKED BY: XXX
DO NOT SCALE DRAWINGS

SHEET CONTENTS
WELL 15 TEMPORARY
PLUGGING

SHEET NO.

C-065

X:\28907\00\210946.06\TECH\DRAWINGS\C-066 WELL_15 FINAL WELL PLUGGING.DWG
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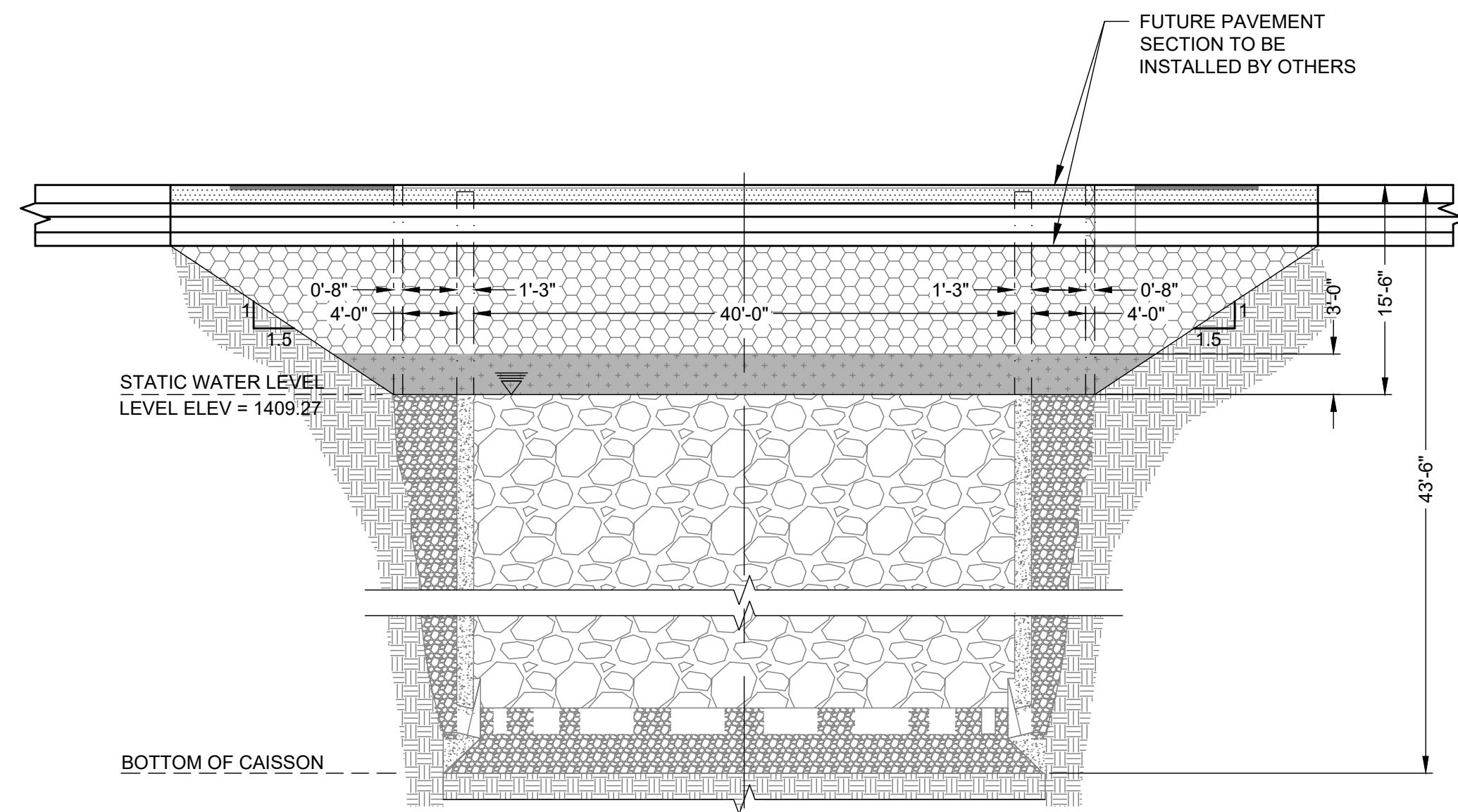
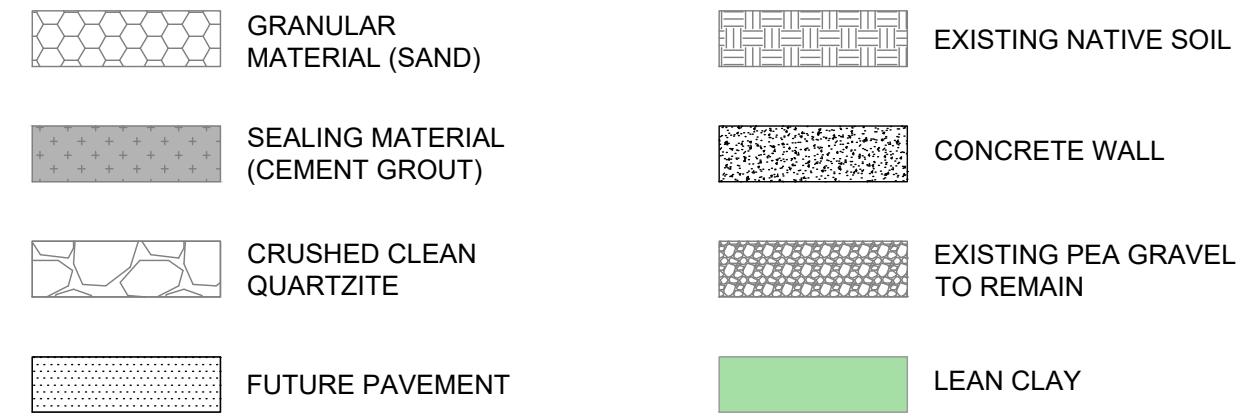
WELL 15 - PLAN VIEW

SCALE: 1" = 10'

B

WELL 15 - SECTION VIEW

SCALE: 1" = 10'



Mead
& Hunt

Mead and Hunt, Inc.
1905 N Plaza Blvd, Suite 2
Rapid City, SD 57702
phone: 888-364-7272
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SIoux FALLS REGIONAL AIRPORT
WELL 15 DECOMMISSIONING

2801 JAYCEE LANE
SIoux FALLS, SD 57104

ISSUED

NOT FOR CONSTRUCTION

M&H NO.: 2890700-210946.06
DATE: JUNE 27, 2025
DESIGNED BY: SFS
DRAWN BY: RJG
CHECKED BY: XXX
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SHEET CONTENTS
WELL 15 FINAL
PLUGGING

SHEET NO.

C-066